

**Notice of Allowability**

Application No.

10/615,182

Examiner

Chuck Huynh

Applicant(s)

DAVIS ET AL.

Art Unit

2683

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address–

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/9/2003.
2. ☒ The allowed claim(s) is/are 1-32.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. Independent claims 1 and 22 are allowed.
2. Claims 2-21 and 23-32 are allowed due to their dependence on an allowed claim.
3. The following is an examiner's statement of reasons for allowance:

Claim 1 is allowed because no prior art completely encompasses the claimed invention. There are no prior art that discloses all the combinations of limitations within claim stating:

A method for dynamically configuring a topology of a communication network, the communication network including a plurality of nodes for providing access to the communication network, the method being performed at each node in the communication network and comprising the steps of:

(a) determining the locations of selected nodes for establishing communication therewith, said selected nodes being selected from the plurality of nodes in accordance with predetermined network topology parameters;

(b) providing a directed beam of electromagnetic radiation for each of said selected nodes for carrying a respective information signal thereon;

(c) directing said directed beam toward a corresponding one of said selected nodes to establish a respective communication link therewith;

(d) determining if said respective communication links established between the plurality of nodes in the communication network provide a closed

signal path amongst the plurality of nodes;

(e) repeating the method at step (a) if said closed signal path is not found in step (d);

(g) evaluating communication quality of each of said communication links against a predetermined link quality parameter;

(g) redirecting said directed beam corresponding to a node for which said communication quality fails to meet said predetermined link quality parameter toward another of said plurality of nodes to establish a new communication link therewith; and

(h) repeating the method at step (d).

Claim 22 is allowed because no prior art completely encompasses the claimed invention. There are no prior art that discloses all the combinations of limitations within claim stating:

A method for configuring a topology of a communication network comprising the steps of:

(a) providing the network with a plurality of nodes for affording access thereto, each of said plurality of nodes including a set of primary data channel transceivers and a set of secondary data channel transceivers;

(b) locating positions of said plurality of nodes with respect to each node in the network and storing said positions in a position table at said each node;

(c) determining link states of said plurality of nodes with respect to said each node in the network and storing said link states in a link state table at said each node;

(d) at said each node in the network, selecting a current set of selected nodes from said plurality of nodes with which a corresponding communication link is to be established in accordance with information stored in said position table and said link state table and storing current selected node information in a connection table',

(e) determining if said current selected node information indicates that said current set of selected nodes are interconnected by a closed signal path;

(f) directing each of said set of primary data channel transceivers of said each node toward a corresponding one of said current set of selected nodes in accordance with said current selected node information stored in said connection table',

(g) establishing said communication link over a primary data channel between said primary data channel transceiver of said each node and a corresponding primary data channel transceiver at each of said current set of selected nodes, said primary data channel carrying an information signal thereon;

(h) at said each node in the network, monitoring said communication link corresponding to each of said current set of selected nodes for communication quality with respect to a predetermined link quality parameter;

(i) adjusting transmitted power at said each node so as to maximize received power at each of said current set of selected nodes if said communication link monitoring of step (g) indicates said communication quality fails to meet said predetermined link quality parameter;

(j) at said each node, if said transmitted power adjustment step (h) fails to improve said communication quality to meet said predetermined link quality parameter, selecting a new set of selected nodes from said plurality of nodes with which a new communication link is to be established in accordance with information stored in said position table and said link state table and storing new selected node information in said connection table at said each node;

(k) determining if said selected node information indicates that said set of selected nodes are interconnected by a closed signal path and, if so, designating, said new selected node information as said current selected node information,

(l) redirecting one of said set of primary data channel transceivers corresponding to one of said current selected nodes for which said communication link fails to meet said predetermined link quality parameter toward one of said new set of selected nodes;

(m) establishing said communication link over a primary data channel between each of said primary data channel transceivers of said each node and a corresponding primary data channel transceiver at each of said new set of selected nodes and designating said new set of selected nodes as said

current set of selected nodes; and

(n) repeating the method at step (h) .

### ***Conclusion***

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lewis; Larry DeWayne discloses a Method and system in a wireless communications network for the simultaneous transmission of both voice and non-voice data over a single radio frequency channel

Hills; Alexander H. discloses a Method for estimating signal strengths

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuck Huynh whose telephone number is 571-272-7866. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chuck Huynh



WILLIAM TROST  
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